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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,818	01/04/2001	Toshihiko Higuchi	81754.0048	3513

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EXAMINER

CAO, PHAT X

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,818

Applicant(s)

HIGUCHI, TOSHIHIKO

Examiner

Phat X. Cao

Art. Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-11 and 21-26 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12-14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Geryk (US. 6,166,441).

Geryk, in Fig. 5, discloses a semiconductor device having a wiring pattern, the semiconductor device comprising: a contact section formed over an interlayer dielectric layer; and a wiring 550 having a connection region to be connected to the contact section, wherein the connection region of the wiring has a generally square plan configuration, the wiring has extension sections on four sides of the connection region and at least one of the extension sections extending in a non-wiring region in the connection region.

Note that process limitations (formed by etching, using a resist pattern as a mask), do not carry weight in a claim drawn to structure. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

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3. Claims 1, 2-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bush et al (US. 6,380,554) in view of Fulford, Jr. et al (US. 5,916,715).

Bush, in Fig. 3, discloses a semiconductor device having a wiring pattern, the semiconductor device comprising: a contact section (not illustrated, see column 8, lines 16-20); a first wiring 72a disposed with a separation from the contact section shorter than a specified separation; and a second wiring 52 having a square connection region 54 to be connected to the contact section, wherein the second wiring 52 has an extension section extending in a non-wiring region and disposed in at least one section of the connection region other than sides thereof facing the first wiring 72a, and wherein the extension section has an extension length identical with the width of the wiring.

Bush does not disclose the contact section formed in an interlayer dielectric layer.

However, forming the contact section of Bush in the interlayer dielectric layer would have been obvious because it is well known to one skilled in the art for the purpose of protecting the contact section from the outside environment. Such well known feature is shown by contact section 10 formed in the dielectric layer 12 as taught in Figs. 3b and 4a of Fulford.

Allowable Subject Matter

4. Claims 7-11 and 21-26 are allowed.

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The prior art of record fails to disclose the combination of the device structure recited in the base claim, including the feature of having a first wiring disposed with a minimum inter-wiring separation with respect to the contact section.

Response to Arguments

5. With respect to Geryk, Applicant argues that if the octagonal overlap 520 constitutes “the connection region”, then Geryk does not suggest the invention as claimed.

Applicant’s arguments are not persuasive because the octagonal overlap 520 is not relied on for teaching “the connection region” as asserted by Applicant, but rather, the square black box (Fig. 5) is relied on for teaching “the connection region” and one of the sides of the octagonal overlap 520 is relied on for teaching “an extension section” as claimed. Therefore, Geryk does teach “wherein the connection region of the wiring has a generally square plan configuration [corresponding to the square balk box], and the wiring has an extension section [corresponding to one of the sides of the octagonal overlap 520] extending in a non-wiring region in the connection region”.

With respect to Bush, Applicant argues that Bush makes no mention of “a separation from the contact section shorter than a specified separation” as claimed.

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Applicant's arguments are not persuasive because Bush's Fig. 3 clearly shows that a separation from the contact section to a first wiring 72a is shorter than a specified separation from a second wiring 52 to the first wiring 72a.

Applicant further argues that Bush does not suggest "a connection region to be connected to the contact section" and "an extension section extending in a non-wiring region in the connection region".

Applicant's arguments are not persuasive because Bush's Fig. 3 clearly discloses a square connection region 54 to be connected to a contact section or "a contact conductor" (not shown in Fig. 3, see column 8, lines 16-20). Furthermore, Bush's Fig. 3 also discloses "an extension section" connected to conductive pad 56b and extending in a direction parallel to the first wiring 72a.

Applicant also argues that Bush does not suggest "a contact section formed in an interlayer dielectric layer".

Applicant's arguments are not persuasive because Fulford does suggest the above feature for the combination.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phat X. Cao whose telephone number is (703) 308-4917. The Examiner can normally be reached on Monday through Thursday. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Olik Chaudhuri, can be reached on (703) 306-2794.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. Group 2800 fax number is (703) 308-7722 or (703) 308-7724.

PC
December 13, 2002


PHAT X. CAO
PRIMARY EXAMINER